

REPORT
ON
PROSPECTING

SUCCESS and MOLYBDENUM CLAIMS

Skeena Division

NTS 103/P5

Owned by R. Dunn

Report by R. Dunn

24 June, 1978

Part 1 of 2

FEDERAL BUREAU OF INVESTIGATION WASHINGTON, D. C. 20535
6961

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INTRODUCTION

The claims are situated 1 km north of Alice Arm, and 5 km SW of the town of Alice Arm. The elevation of the claims is between approximately 1000 and 2000 ft A.S.L. The terrain is rugged, a mixture of timbered slopes and generally swampy tablelands. Access was by helicopter. The helicopter was also used for air photos.

The core of the property is the old Tidewater workings, the Molybdenum mineralization occurring in banded quartz veinlets. The property is currently owned by R. Dunn. In view of the strong demand for Molybdenum, the property may have possibilities as a high-grade mine.

The current exploration was conducted with the primary objective of determining if the high-grade showings fit in with the general "shell" or "ring" type deposition typical of known Alice Arm porphyry deposits. An area about 1500 x 1000 m was examined.

INTERPRETATION

A general survey of the area was conducted to determine the size and shape of the granitic intrusion, and to attempt to determine if the molybdenum mineralization of the old Tidewater workings extended to the margins of the contact zone about the intrusive.

Extensive rock samples were collected and returned for inspection. Following page, and Map 2 note the samples and their respective positions.

The granitic intrusion is of roughly oval shape, the long axis trending to the northeast. The stock intrudes into argillaceous host rock. Samples of hornfels have been found at the contact zone. Andesite or basaltic dykes are found trending roughly along the axis of the intrusive.

In the creek bed, widespread molybdenum mineralization is present in banded quartz veins, and high-grade samples are found in the old adits and stope. Minor amounts of molybdenum has been noted in the hornfels near the contact zone. Molybdenum was also found much lower in the creek and quite distant from the surface expression of the intrusive. Minor amounts of molybdenum was also noted in the leucogranite of the intrusive stock, especially to the south side. It was noted that the core of the stock was generally barren of any appreciable amount of molybdenum.

In view of the high grade of mineralization in the old workings, and of evidence of disseminated molybdenum along the margins of the contact, it is the writers opinion that further work should be done.. A program should include drilling to depth on the south side of the stock, and from the argillaceous side of the contact.

Rock Samples

<u>No.</u>	<u>Remarks</u>
21	Alice Arm intrusion- qtz flooding, microveinlets
22	as above
23	Argillic alteration of AA intrusion- qtz flooding
24	Basalt dyke
25	Basalt dyke - 30 meters exposed, strike 060
26	silitic argillite
27	siltstone
28	siltstone
29	AA granite
30	granite
31	granite
32	leucogranite with moly
33	bedded sandstone/siltstone - banded laminate 10 ft section visible str 130 dip 37 NE
34	granite
35	hornfels- siltstone
36	granite with minor moly
37	granite
38	granite
39	outcrop- south side of creek py
40	granite
41	float- moly along fracture plane
42	granite- rusted py
43	granite- micro qtz veining
45:	altereded granite near souther contact

<u>No.</u>	<u>Remarks</u>
45a	Hornfels- contact
46	good moly along shear plane
48	siltstone
49	basalt- py
50	hornfels- moly
51	granite- 5" qtz veins
52	float - granite py, minor moly
53	qtz- moly
52a	hornfels
54a	qtz veins 3-4" thick along steep plane 120 str/ dip 65 SW
54b	hornfels
55	qtz with much moly
56	andesite dyke
57	qtz veins
58	hornfels- qtz veins
59	fine grained hornfels, qtz with moly
60	qtz, much moly
61	creek bedrock- granite with qtz veins, moly
62	adit sample- moly
63	hornfels with qtz stringers- moly
64	fine grained biotite hornfels
65	hornfels
66	bedrock- qtz veins with moly
67	Gossan- fine grained with qtz stringers
68	minor py with moly

STATEMENT OF COST

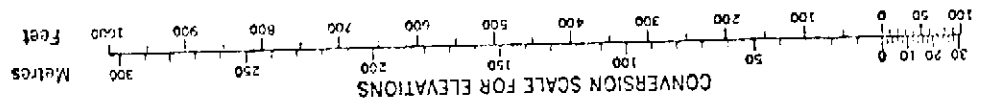
a)	Wages 3 days @ 40 per day/man, 2 men 3 July 1977 to 5 July 1977	\$ 240
b)	Food and accomodation 2 nights at \$ 20 for accomodation 3 days food at \$ 10 each - 2 men	40 60
c)	Transportation 3.6 hours helicopter @ \$ 125/ hr Terrace to Alice Arm to Terrace 3- 5 July, 1977	450
g)	Report	40
h)	Air photos developed and printed	<u>10</u>
	TOTAL COST	\$ 840



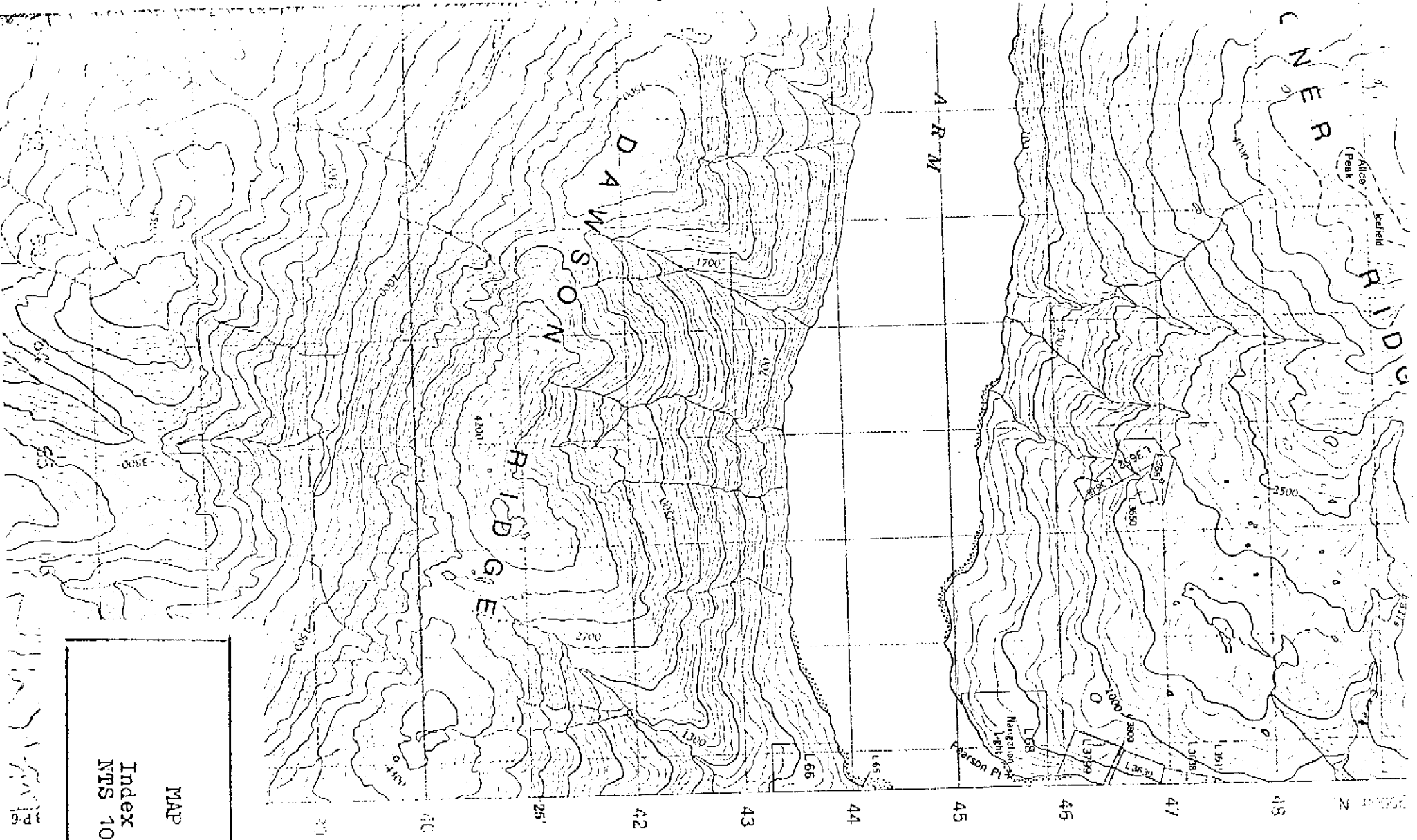
QUALIFICATIONS

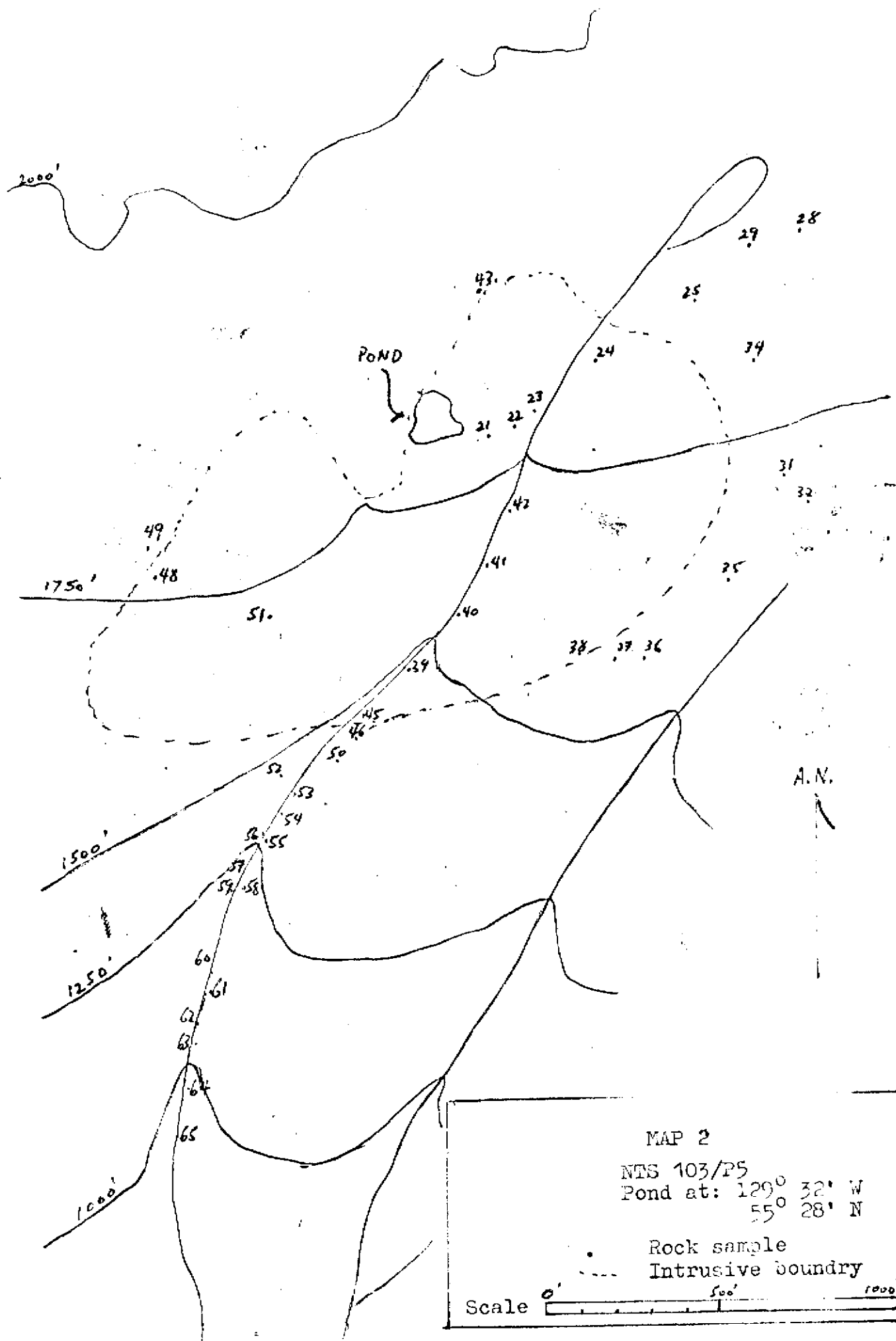
The writer has been an active prospector since 1970. In addition to taking the B.C. and Yukon Chamber of Mines Prospecting course, the writer has taken courses at Concordia University of Montreal in Geology, and Structural Geology; and at U.B.C., Minerology.

TN
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11



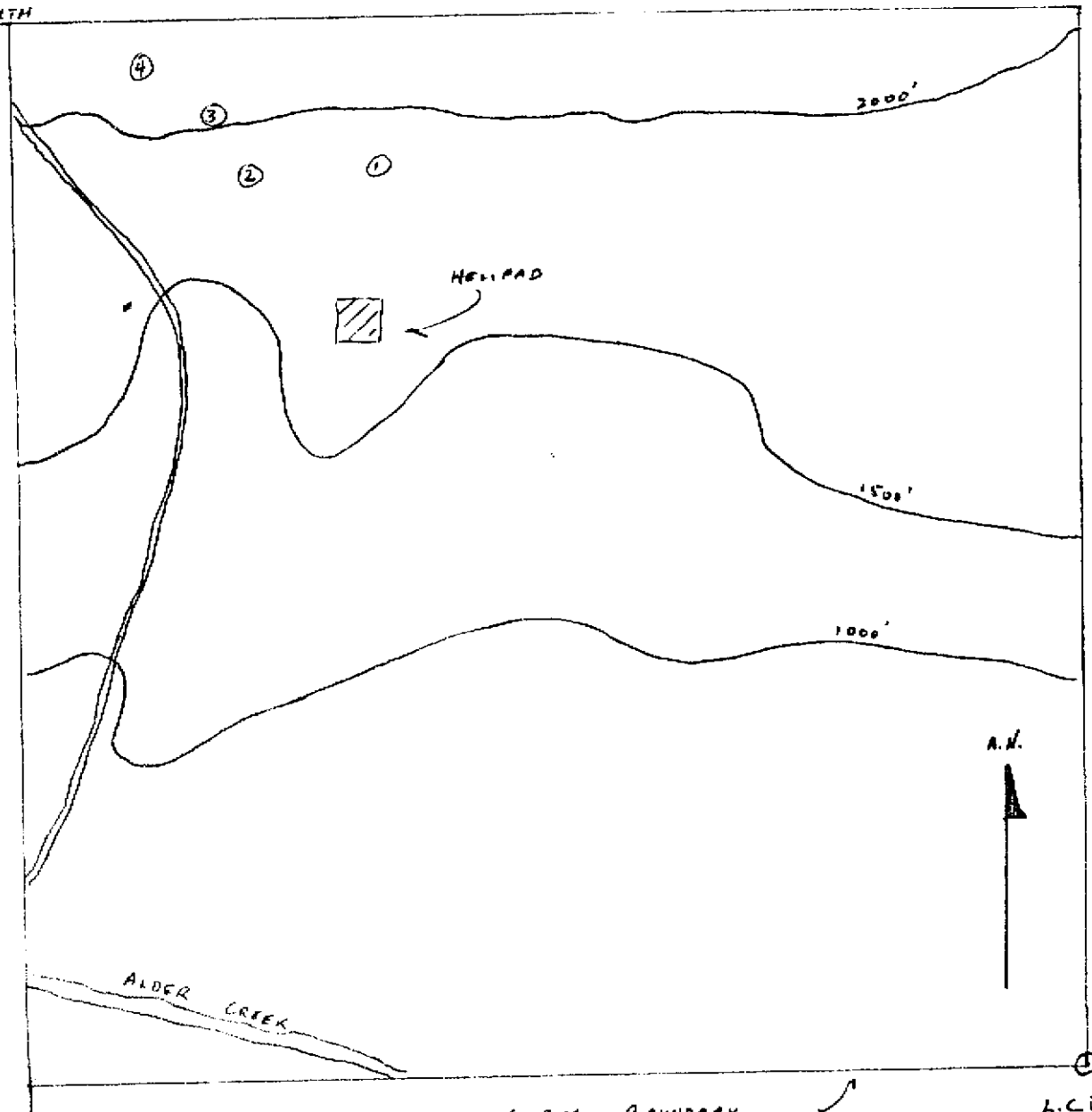
MAP 1
Index Map
NTS 103/P5





MAP 2
 NTS 103/P5
 Pond at: $129^{\circ} 32' W$
 $55^{\circ} 28' N$
 • Rock sample
 - - - - - Intrusive boundary
 Scale 0' 500' 1000'

6100 N NORTH



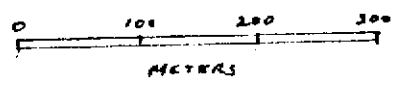
498000 N. EAST

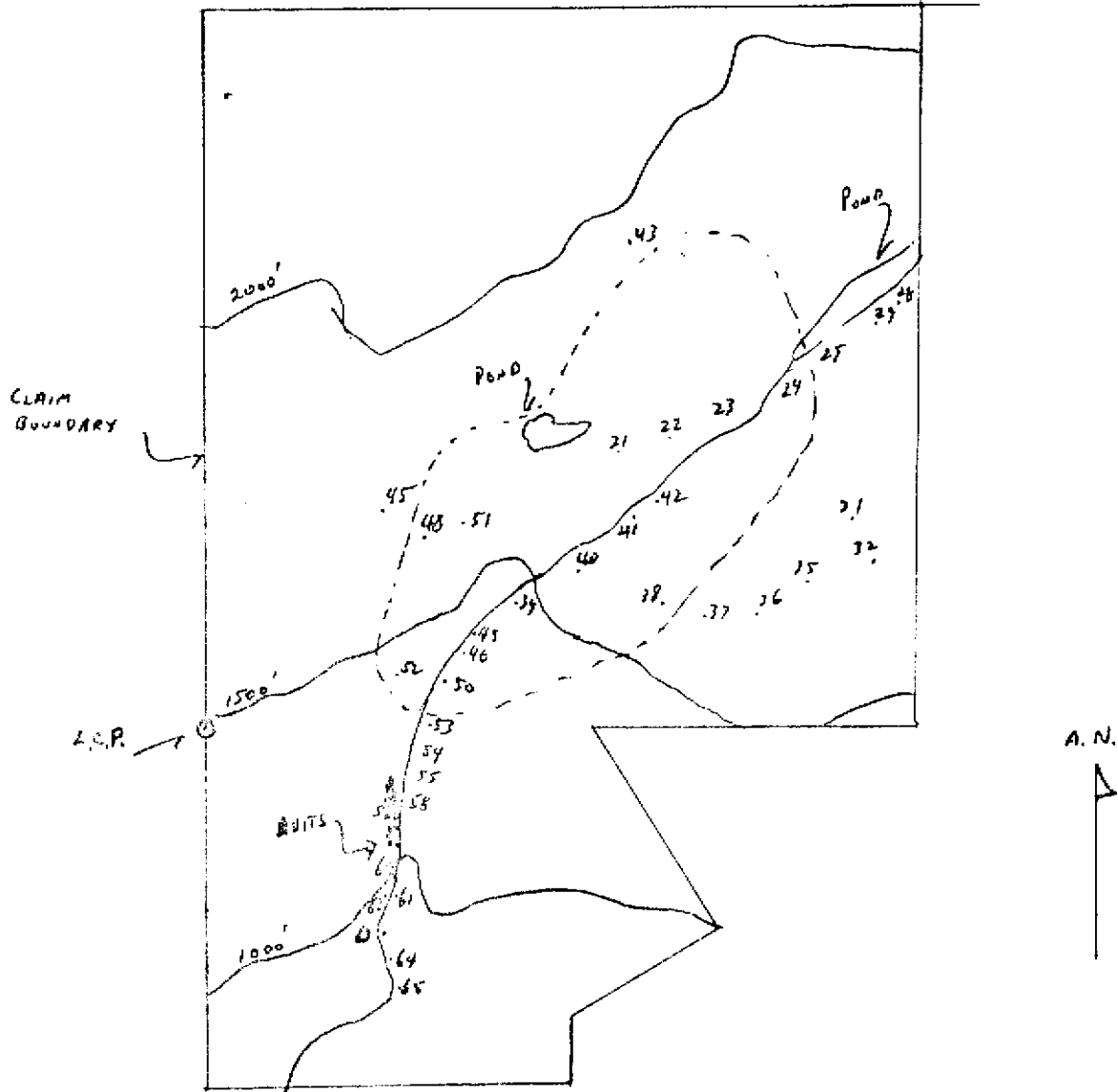
CLAIM BOUNDARY

L.C.P.

TWIN
 Map 2
 Sample Map

SCALE:





Map 2 rvsd
 103/85
 TIME GROUP
 legend
 ----- intrusive
 . rock sample
 scale: 1: 10,000
 meters

REPORT ON THE GEOLOGY AND BULK SAMPLING PROGRAM

Tide Claim Group

Skeena Division

NTS 103 P/5

Owned by R.M. Dunn

Report by N.R. Tipman

Dated August 14, 1978

Part 2 of 2

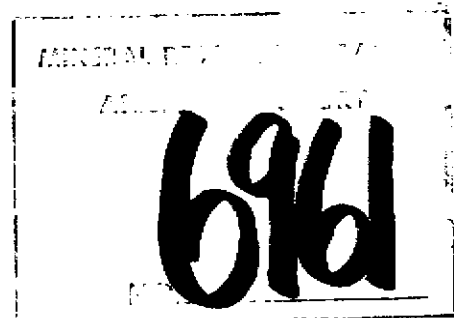


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INTRODUCTION

The Tide property was visited by two geologists by helicopter on November 26, 1977 with the objective of acquiring a bulk sample for assay and metallurgical testing. Along with the bulk sample, a general assessment was made of the engineering problems including those of mining, waste disposal, transportation, and dock facilities at tidewater.

The property is currently owned by Mr. R.M. Dunn. It consists of two Crown Granted claims called the "Tide Group", which were recorded in June, 1977. A Prospector's Report was filed on June 24, 1977.

The claim group is located 1 km north of Alice Arm inlet and 5 km southwest of the town of Alice Arm at an elevation covering 1000 - 2000 ft. above sea level. The terrain is rugged with a mixture of timbered slopes and generally swampy tablelands (Map 1).

Located on the property are two adits, which were developed over the years 1916 to 1931. In 1916 the production was 383 tons of ore grading 1.6% MoS_2 . Between 1916 and 1931, 13,000 lbs. of molybdenite were produced. In 1930, the Dalhousie Mining Co. undertook further development of the property by opening a second adit and building a 100 ton per day flotation plant at tidewater. Consequently, located on the property are old, dilapidated buildings, an overgrown trail between the mining location and tidewater and a tailings dump containing an estimated 230 tons of development ore assaying about 0.5% MoS_2 .

More recently, the property was optioned by Canex Exploration in 1964. During 1964 and 1965, about 2,700 ft. of diamond drilling was carried out along with geological and geochemical surveys (1).

BULK SAMPLING

The No. 2 adit, elevation 1121 ft., was sampled at the time of the visit to the property. The adit was in good condition, with the old timbers and supports having been repaired by Canex Aerial Exploration. The sampling was carried out across the numerous veins located as shown in Figure 1. A total of about 10 kg of material was taken, crushed, composited and sent for assay. The results, given below are also documented in Appendix 1.

<u>Bulk Sample Assay</u>			
Ag(O ₃ /ton)	Pb(%)	Zn(%)	MoS ₂ (%)
0.12	0.04	0.02	3.47

At the same time, a geological map of the adit was made, also shown in Figure 1. This map was somewhat modified by that reported by Stevenson (2).

The molybdenite is unevenly dispersed in the fine grained quartz veins. The veins vary in width from 10 cm to 5 meters. The locations of the veins indicate structural discontinuities and no estimate of mineable tonnages could be made.

However, mining of this ore, which consists of narrow to medium width veins, can only be carried out by the usual cut and fill methods.

METALLURGY

The ore consisted of massive blebs of molybdenite in fine grained quartz which makes the metallurgical process very straight forward. Crushing the ore to pass 150 microns and flotation with fuel oil and a frother such as Pine oil yielded recoveries greater than 98%. The low level of Pb in the ore indicated that additional processing to remove this contaminant would not likely be required.

Additional testwork is recommended to produce a final flowsheet if and when the scale of operation is determined.

WASTE DISPOSAL

The mining area contains a tailings disposal area which could be developed for containment of mill tailings. The mill water can be recycled with minimum impact on the environment. Water supplies can be obtained from any of the creeks that cut through the area. Although the water supply is quite variable, sufficient reserves should be available for a small mining operation. The details of water management will depend on the requirements of the Environmental Control Commission.

TRANSPORTATION AND DOCK FACILITIES

The dock located at tidewater requires repair and the trail leading to the campsite must be cleared for accessibility to mining equipment and supplies. The location of the mine is quite advantageous, in that Alice Arm is a regular shipping channel and supplies and equipment can easily be brought in by barge. Transport of equipment to the minesite may be difficult because of the steep (25⁰) terrain. The possibilities of rehabilitating the tramway should be considered.

CONCLUSIONS

1. The grade of ore in the subject area indicates that this property could be considered for production as a small, high grade mine. Confirmation of tonnage is required.
2. The location, particularly its nearness to tidewater and a regular shipping channel indicates that supplies and equipment could be brought in at reasonable cost.
3. The recovery of molybdenite from the ore should be very straight forward, and the bulk concentrate should be marketable without further processing.

RECOMMENDATIONS

1. Additional exploration is recommended, particularly to outline ore tonnages.

2. If sufficient tonnage is indicated, a viable small, high grade mining operation can be considered.

REFERENCES

1. Mines and Petroleum Resources Report (1964), B.C. Minister of Mines, pp 39 - 41.
2. Stevenson, J.S., B.C. Minister of Mines Bulletin 9, pp 61 - 67 (1940).

1)

STATEMENT OF COST

a) Wages 27 November 1977 2 men	\$100
b) Food and Accommodation Terrace 27 November 1977 2 men @ 35	70
c) Transportation Helicopter Terrace, Alice Arm, Terrace 1.8 hours: \$608 50%	304
d) Report	65
e) Assays	<u>25</u>
	TOTAL \$564

FIGURE 1

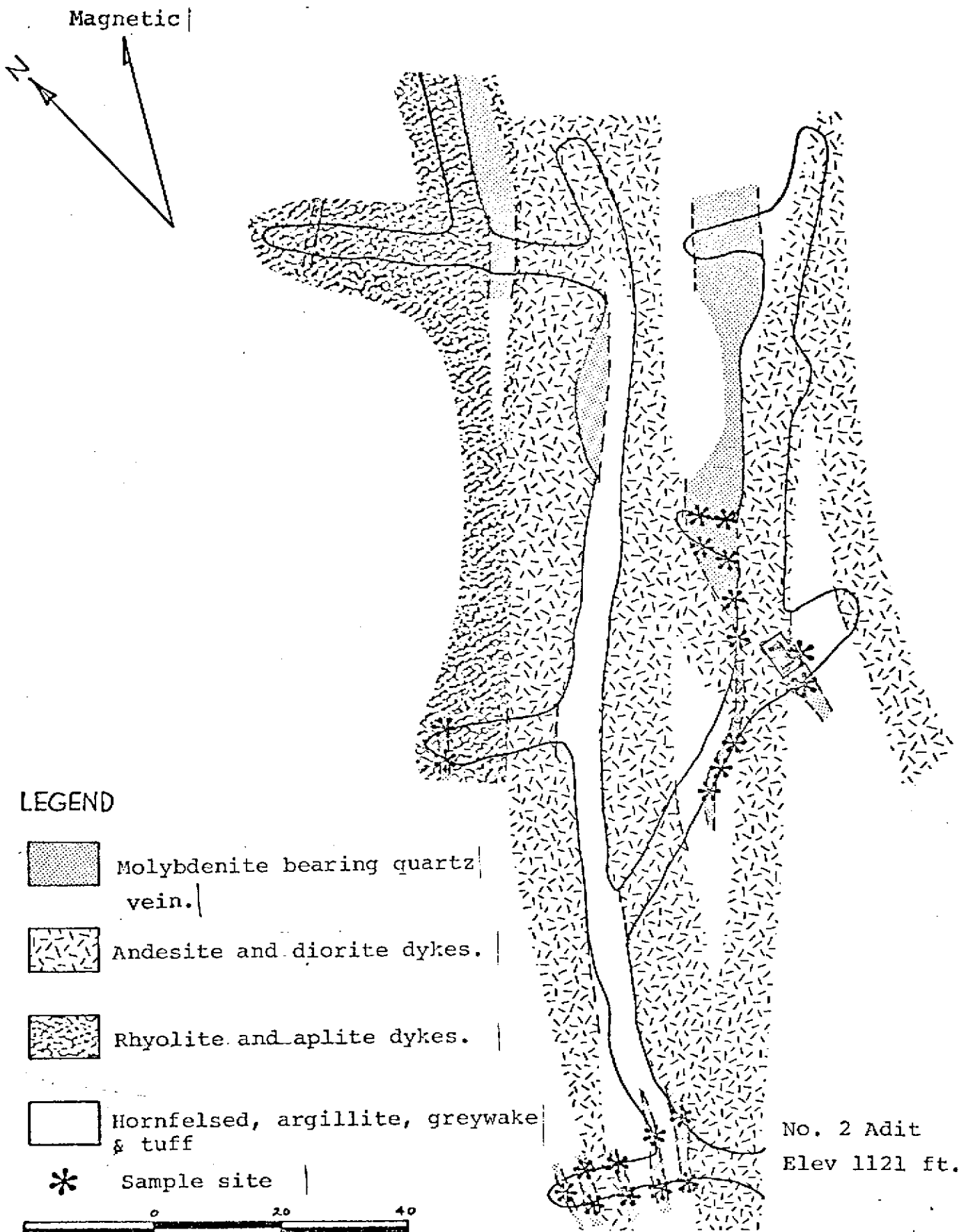


Figure 1. Tide Molybdenum property. Plan of No. 2 Adit showing sample points for metallurgical bulk sample. Geology modified from Stevenson (1940)

APPENDIX 1
GENERAL TESTING LABORATORIES

DIVISION SUPERINTENDENCE COMPANY (CANADA) LTD

1001 EAST PENDER ST., VANCOUVER, B.C., CANADA, V6A 1W7
 PHONE (604) 254-1647 TELEX 04-507514 CABLE SUPERVISE

TO:
 Mr. Richard Dunn
 #29 De Hreslay
 Pointe Claire
 Quebec
 H9E 4M8

CERTIFICATE OF ASSAY

No.: 7807-2360 DATE: August 3, 1978

We hereby certify that the following are the results of assays on: **Ore**

MARKED	XXXXXX	SILVER	Lead	Zinc	Molybdenum	XXX	XXX	XXX
	XXXXXX	oz/st	Pb (%)	Zn (%)	MoS ₂ (%)			
No Mark		0.12	0.04	0.02	3.47			
<p><u>REMARKS:</u> MoS₂ calculated from total molybdenum.</p>								
<p>cc. Mrs. I. Dunn cc. Mr. R. Tipman</p>								

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[Signature]
 PROVINCIAL ASSAYER

COPY

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MEMBER American Society For Testing Materials • The American Oil Chemists' Society • Canadian Testing Association
 REFEREE AND/OR OFFICIAL CHEMISTS FOR National Institute Of Oilseed Products • The American Oil Chemists' Society
 OFFICIAL WEIGHMASTERS FOR Vancouver Board Of Trade

1. I, N.R. Tipman, have a Ph.D. in Mineral Engineering from the University of British Columbia.
2. I am a Professional Engineer with the Association of Professional Engineers, Geologists, and Geophysists of Alberta.
3. I possess eight (8) years experience in the fields of mineral exploration and mineral processing.
4. I have no material interest in the "Tide Group" claims, actual or contemplated.
5. I reside at 73 Galloway Drive, Sherwood Park, Alberta T8A 2M5.



N. Robert Tipman, Ph.D. P.Eng.

August 14, 1978

CAMPBELL

CHALONER RIDGE

TIDE GROUP

ALICE ARM

DAWSON RIDGE

MAP 1

INDEX MAP

103 P/5

Mans Pt
Navigation Light

Hans Hill

Alice Peak

Icefield

Icefield

Glenora CK

Falls

Crack

L68
Navigation Light

L66

25'

